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| 10/554,032 | 10/20/2005 | Achim Ackermann-Markes | 2003P06014WOUS | 7810 |

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Siemens Corporation
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| EXAMINER |
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RUTKOWSKI, JEFFREY M

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| ART UNIT | PAPER NUMBER |
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2619

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06/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|---|--|--|
| Office Action Summary | Application No. 10/554,032 | Applicant(s) ACKERMANN-MARKES ET AL. | |
| | Examiner JEFFREY M. RUTKOWSKI | Art Unit 2619 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/20/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-12 have been cancelled.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. **Claims 19-24** are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of previous **claims 13 and 14**. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The invention embodied in **claims 13 and 14** inherently have a layer 2 device arranged between the network node device and the subnetwork via Virtual Local Area Network (VLAN) configuration.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 13-30** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. For **claims 13 and 30**, it is unclear what is meant by “transmitting a configuration message set...” found in **claim 13** and “transfer of a set configuration message...” found in **claim 30**. It is unclear whether the claims are referring to a group (mathematical set) of configuration messages or if the claims are referring to a single message that performs some

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setting function. The Examiner has interpreted the phrase "set" to refer to a message used for performing some setting action.

6. It is also unclear what is meant by the phrase "information addressing the subnetwork". The Examiner has interpreted this phrase to mean subnetwork address information, such as an address in the range of the subnetwork.

7. For **claims 17-18**, the use of "and/or" renders the claims indefinite because it is not clear as to what constitutes information addressing the subnetwork.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. **Claims 13-14, 19-27 and 29-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bastide et al. (US Pg Pub 2005/0044271), hereinafter referred to as Bastide, in view of Yim (US Pg Pub 2002/0052972) Iturralde (US Pat 6,128,665) and Grigsby (US Pg Pub 2003/0208577).

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11. For **claims 13 and 30**, Bastide discloses a network architecture that includes Dynamic Host Configuration Protocol (DHCP) servers **13,17** (network element) that each manage the address space (determine addressing information) of a particular Virtual Local Area Network (VLAN) **19,20** (a virtual network with at least one subnetwork) [**figure 1**]. The packets that are exchanged in Bastide's network include VLAN identification (tag) information [**0028**]. Bastide also discloses a situation where an Internet Protocol (IP) phone **12** (communications device), that is located in VLAN **20**, receives an IP address valid in VLAN **19** from DHCP server **17** [**0030-0032**]. In this scenario, the DHCP server **17** (network element) transmits a DHCP reply (a configuration message) via network **18** that contains an IP address (subnetwork addressing information) that makes IP phone **12** part of the VLAN **19** subnetwork. The IP phone **12** (communications device) is configured to communicate with VLAN **19** (VLAN identification number) for voice only [**0031**].

12. Bastide discloses the VLANs are interconnected by a network **18** [**figure 1**]. However, Bastide does not disclose the element(s) that make up the interconnection network **18**. Yim discloses a switching router **200** (a network node) is used to interconnect two separate VLANs [**figure 5**]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a switching router **200** in Bastide's invention to provide communications amongst VLANs [**Yim, 0020**].

13. The combination of Bastide and Yim disclose a switching router (a network node) that forwards DHCP messages (configuration messages) between VLANs (virtual networks). The DHCP messages transmitted between VLANs are unicast messages, not broadcast messages. Grigsby discloses broadcast configuration are periodically transmitted from a management node

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to managed nodes **[0030, figure 1]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use broadcast configuration message in Bastide's invention to efficiently manage the status of each node by letting each node know where to send error reports **[Grigsby, abstract]**.

14. The combination of Bastide, Yim and Grigsby disclose a switching router (a network node) that forwards broadcast configuration messages between VLANs (virtual networks). The combination of Bastide and Yim does not disclose if the DHCP messages include VLAN information. Iturralde discloses broadcast messages can be directed to a VLAN **[col. 1 lines 55-60]**. Since the broadcast packet is directed to a VLAN and not a particular host, Irrutalde's teaching suggests tagging a broadcast packet with a VLAN identifier. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use VLAN tags in broadcast packets in Bastide's invention to provide port-based VLANs **[Irrutalde, col. 1 line 60]**.

15. The combination of Bastide and Grigsby disclose a communications device that receives a broadcast message **[Grigsby, figure 1]**.

16. For **claim 14**, Bastide does not disclose the use of a router. Yim discloses a switching router **200** (a network node) is used to interconnect two separate VLANs **[figure 5]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a switching router **200** in Bastide's invention to provide communications amongst VLANs **[Yim, 0020]**.

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17. For **claims 19-20**, Bastide discloses an end-to-end link includes switches and routers.

Additionally, the IP phones (communications device) is connected to a switch, which suggests a switch is placed (arranged) between the network node and the subnetwork **[0002]**.

18. For **claims 21-22**, Bastide discloses information can be forwarded that is either tagged or untagged **[0024]**.

19. For **claims 23-24**, Bastide does not disclose the concept of port-based VLANs. Iturralde discloses port-based VLANs are formed by defining switch (layer-2 network node device) ports (plurality of access units) to a VLAN (virtual networks with assigned identification numbers) **[col. 1 lines 55-62]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use port-based VLANs in Bastide's invention to manage network resources more efficiently by creating logical groups of resources **[Iturralde, col. 1 lines 41-51]**.

20. For **claim 25**, Bastide discloses the use of VLAN tags **[0023]**.

21. For **claim 26**, Bastide discloses an IP phone (communications node) receives IP address information via DHCP **[0005]**. Bastide's teaching suggests that when the DHCP server (network element) replies (configuration message) to a DHCP request from the IP phone (communications node), the IP address (identification number) will be part of the DHCP reply payload.

22. For **claim 27**, Bastide discloses the use of DHCP messages (configuration messages) in a network **[0005]**. Bastide does not disclose DHCP messages (configuration messages) are sent at intervals. Grigsby discloses configuration messages can be broadcast periodically **[0030]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use broadcast configuration message in Bastide's invention to efficiently manage the status of each node by letting each node know where to send error reports **[Grigsby, abstract]**.

23. For **claim 28**, Bastide discloses VLAN identifiers and IP addresses (identification number) are interrelated [0024].

24. **Claims 15-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bastide in view of Yim, Iturralde, and Grigsby as applied to **claims 13 and 14 respectively** above, and further in view of Norris (US Pat 5,557,748).

25. For **claims 15-18**, the combination of Bastide, Yim, Iturralde and Grigsby disclose the exchange of DHCP message to address nodes in a network. The combination of Bastide, Yim, Iturralde and Grigsby does not disclose what other information, besides node address information, can be contained in a DHCP message. Norris discloses a configuration message, that includes DHCP messages [col. 9 lines 63-65], includes a broadcast address (claims 15-16) and a subnet mask (claims 17-18) [col. 11 lines 13-17]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to include broadcast addresses in Bastide's invention to provide dynamic configuration functionality [Norris, title].

Allowable Subject Matter

26. **Claim 28** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY M. RUTKOWSKI whose telephone number is (571)270-1215. The examiner can normally be reached on Monday - Friday 7:30-5:00 PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey M Rutkowski
Patent Examiner
06/17/2008

/Hassan Kizou/
Supervisory Patent Examiner, Art Unit 2619